WHAT IS CLAIMED IS:

1. A thin film magnetic head comprising:

a lower core layer; an upper core layer; at least one insulating layer positioned between the lower core layer and the upper core layer; a track width restricting groove being formed in the insulating layer; and a lower magnetic pole layer continuing from the lower core layer and/or an upper magnetic pole layer continuing from the upper core layer, and a gap layer positioned between one of the core layers and one of the magnetic pole layers that opposes the core layer or between the two magnetic pole layers being provided in the track width restricting groove,

wherein a stopper layer is placed, in a portion excluding the track width restricting groove, between the lower core layer and the insulating layer, and the stopper layer is formed of an insulating material having an etching rate lower than a reactive ion etching rate of the insulating layer.

2. A thin film magnetic head according to Claim 1, wherein the stopper layer is formed to have a film thickness that is smaller than the insulating layer.

3. A thin film magnetic head according to Claim 1,

wherein an etching rate of the stopper layer in reactive ion etching is lower than the etching rate of the insulating layer by ten times or more.

4. A thin film magnetic head according to Claim 3, wherein the insulating layer is formed of SiO_2, while the stopper layer is formed of Al_2O_3 and/or Si_3N_4.

5. A manufacturing method for a thin film magnetic head formed of a lower core layer, an insulating layer, and an upper core layer that are deposited in this order, comprising the steps of:

forming a stopper layer which is composed of an insulating material on a lower core layer;

forming, on the stopper layer, at least one insulating layer composed of an insulating material having an etching rate higher than a reactive ion etching rate of the insulating material used for the stopper layer;

forming a mask on the insulating layer at a predetermined gap;

etching the insulating layer exposed in the gap by reactive ion etching and removing the insulating layer until the stopper layer is exposed so as to form a track width restricting groove;

removing the stopper layer exposed in the track width

restricting groove by the reactive ion etching to expose the lower core layer;

forming a lower magnetic pole layer continuing from the lower core layer and a gap layer on a lower magnetic pole layer, or forming the gap layer on the lower core layer, in the track width restricting groove; and

forming an upper magnetic pole layer on the gap layer and forming an upper core layer on the upper magnetic pole layer, or forming the upper core layer directly on the gap layer, in the track width restricting groove.

6. A manufacturing method for a thin film magnetic head according to Claim 5, wherein, when cutting the insulating layer by reactive ion etching, over-etching in which the insulating layer is cut by more than a film thickness thereof is performed to completely remove the insulating layer in the gap so as to form the track width restricting groove, and the over-etching is performed to such an extent that the stopper layer is left at a bottom of the track width restricting groove.

7. A manufacturing method for a thin film magnetic head according to Claim 6, wherein if a thickness of a film of the insulating layer formed on the stopper layer, which film is to be removed by the reactive ion etching, is

denoted as X1, a ratio of an etching rate of the insulating layer to an etching rate of the stopper layer is set to Y:1, and an over-etching amount for the film thickness X1 of the insulating layer is denoted as N%, then a film thickness X2 of the stopper layer is set to $X2 \geq (X1 \cdot N) / (Y \cdot 100)$ (The over-etching amount is determined as follows: when it is assumed that the same material as that used for the insulating layer is over-etched, exceeding the film thickness X1, an amount of the material etched, exceeding the film thickness X1 indicates the over-etching amount, which is expressed by $X1 \cdot N/100$).

8. A manufacturing method for a thin film magnetic head according to Claim 5, wherein an etching rate of an insulating material employed for the stopper layer is lower than an etching rate of an insulating material employed for the insulating layer by ten times or more.

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9. A manufacturing method for a thin film magnetic head according to Claim 8, wherein the insulating layer is formed of SiO_2, while the stopper layer is formed of Al_2O_3 and/or Si_3N_4.